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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,017	06/29/2006	Shigenobu Ikenaga	1155-0286PUS1	8055
2292 7590 06/05/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER LU, C CAIXIA	
			ART UNIT 1713	PAPER NUMBER
			NOTIFICATION DATE 06/05/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No. 10/550,017	Applicant(s) IKENAGA ET AL.	
	Examiner Caixia Lu	Art Unit 1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 2-9, 11 and 12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 10, 13 and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Specification

2. The disclosure is objected to because of the following informalities: T_m of 66.5 °C of Example 3 listed in Table 2 of page 170 is inconsistent with T_m of 69.0 °C in the text section of Example 3 in line 16 of page 168. Since the data in Table is extracted from the text section, 69.0 °C should be the T_m for Example 3.

Clarification and Appropriate correction are required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 13 and 14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention: The new end point of T_m of 66.5 °C is new matter because the specification does not anticipate the end point as shown in the Objection of the Specification above.

Claim Rejections - 35 USC § 102/103

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5. Claims 1 and 10 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kawai et al. (EP 1 138 687).

The instant claims are directed to propylene/butene copolymer with specified triad isotacticity, molecular weight distribution, intrinsic viscosity and melting point (T_m).

Kawai's Examples 38 demonstrates the preparation of propylene/butene copolymer in the presence of a metallocene catalyst, dimethylmethylene(3-tert-butyl-5-methyl-cyclopentadienyl)fluorenyl zirconium dichloride (page 237, lines 40-44), wherein the T_m is 73°C and intrinsic viscosity is 0.94 dl/g, both properties of the copolymers are in the range of the instant claims. Although Kawai's examples do not disclose all of the claimed limitations such as the mol% of butene in the copolymer, molecular weight distribution, isotacticity and the specified relationship of the T_m and the mol% of butene in the copolymer, Kawai's Examples 38 is made by processes using catalyst compositions which are substantially identical to that disclosed in Example 3 of the instant specification, as a matter of fact, the same metallocene complex is used in both of Kawai's Examples 38 and Example 3 of the instant application. Under these circumstances, one of the ordinary skill in the art would have expected that the propylene/butene copolymer would be identical to the copolymer of the instant claims and thus inherently have the claimed limitations.

Once a product appearing to be substantially identical is found and a 35 USC 102/103 rejection made, the burden of proof is shifted to the applicant to show an unobvious difference. In re Fitzgerald, 205 USPQ 594. In re Fessmann, 180 USPQ 324.

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Applicants have not met their burden to demonstrate an unobvious difference between the claimed product and the products of the prior art examples.

Claim Rejections - 35 USC § 103

6. Claims 1, 10 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawai et al. (EP 1 138 687).

Kawai teaches that propylene copolymer comprising 50-99.5 mol% of propylene and 50-0.5 mol% comonomer prepared in the presence of a metallocene catalyst and Kawai's Examples 37-42 demonstrate the preparation of propylene/butene copolymer in the presence of a metallocene catalyst, dimethylmethylene(3-tert-butyl-5-methyl-cyclopentadienyl)fluorenyl zirconium dichloride, wherein the T_m is in the range of 73-108 °C and intrinsic viscosity is in the range of 0.89 to 3.56 dl/g (pages 8-9, [021] and [0022]; and pages 237-238, Examples 37-42). It is noted that as the amount of butene comonomer increased, the T_m of propylene-butene copolymer decreases by comparing Examples pairs of 37 and 38, 39 and 40, and 41 and 42 respectively. This is because as the amount of butene monomer increase in the reaction media, the amount of butene incorporated in the propylene copolymer increases, the regularity and the length of propylene blocks in the copolymer decrease, thus, the T_m controlled by the regularity of propylene blocks in the copolymer decreases.

Therefore, it would have obvious a skilled artisan at the time of the invention to prepare a propylene-butene copolymer with increased butene content compared to Kawai's Example 38 in the comonomer range of 50-0.5 mol%, and thus to provide a copolymer with lowered crystallinity and melting temperature since such is within the

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scope of Kawai's teaching and in the absence showing of any criticality and unexpected results. Those copolymers are expected to inherently meet the limitations of the copolymer of the instant claims for the same rationale as shown the rejection under 35 U.S.C. 102/103 above.

Response to Arguments

7. Applicant's arguments with respect to claims 1 and 10 have been considered but are moot in view of the new ground(s) of rejection.

Applicants' discuss over Example 3 and Comparative Example 3 is irrelevant the outstanding rejections because the copolymer of Comparative Example 3 is prepared in the presence of a Ziegler catalyst and thus having different macrostructures compared to the copolymers of Kawai and those of instant claims. That is, Comparative Example 3 cannot be used to predict the behaviors of Kawai's copolymers.

Applicants need provide evidence to show the different between the copolymer of Kawai and those of the instant claims in order to overcome the rejections of the record.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Caixia Lu whose telephone number is (571) 272-1106. The examiner can normally be reached from 9:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful and the matter is urgent, the examiner's supervisor, David Wu, can be reached at (571) 272-1114. The fax numbers for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1700.

A handwritten signature in black ink, appearing to read 'Caixia Lu', with a stylized flourish at the end.

Caixia Lu, Ph. D.
Primary Examiner